United States Department of the Interior
Fish and Wildlife Service
Leavenworth National Fish Hatchery Complex
Entiat, Leavenworth and Winthrop Salmon Hatcheries
12790 Fish Hatchery Road
Leavenworth, WA 98826
Phone: (509) 548-7641
Fax: (509) 548-3401

April 17, 2012

Lindsay Guzzo
Environmental Engineer
Environmental Protection Agency
Office of Water and Watersheds
1200 Sixth Ave
NPDES Permits Unit OWW-130
Seattle, WA 98101
Phone: (206) 553-0268
Fax: (206) 553-1280
Email: guzzo.lindsay@epa.gov

RE: National Pollutant Discharge Elimination System (NPDES) Permit - Updated Information for Leavenworth National Fish Hatchery (Outfall #6)

Mrs. Guzzo,

The Leavenworth National Fish Hatchery (LNFH) submitted a new NPDES permit application on October 24, 2011 to the Environmental Protection Agency. In that application, LNFH proposed to pump a portion of discharge water destined for Outfall #1 upstream to a new discharge point (Outfall #6, ~ rm 3.3) in the Hatchery Channel section (rm 2.8 to 3.8) of Icicle Creek. At the time the application was submitted, LNFH stated that the details for this new proposed discharge point would be provided within 6 months.

The purpose of Outfall #6 is to recharge LNFH's wells. The LNFH operates seven wells which produce the quality of water needed to sustain its fish production program. Currently, LNFH needs between 1,060 and 6,590 gpm of ground water during its fish production cycle. The hatchery's wells draw water from two aquifers, one deep and one shallow. Wells 1 through 4 and 7 draw water solely from the shallow aquifer, well 5 from the deep aquifer, and well 6 draws water from both. The shallow aquifer is influenced by surface water. Recharge of the shallow aquifer is directly affected by how much water is present in the hatchery channel. The hatchery channel is dewatered when the stream flow in Icicle Creek above both channels is approximately below 300 cfs and flow into the historical channel is unrestricted. Dewatering of the hatchery

channel can occur in late summer, fall, and early winter for short or long periods of time. Dewatering of the hatchery channel reduces recharge to the shallow aquifer causing groundwater levels and pumping capacities to drop when wells are in production. Further information on Outfall #6 has been included in the enclosed, revised CONTINUATION SHEET from EPA FORM 3510-2B (Rev. 11-08).

If further information is required please contact Malenna Cappellini the Leavenworth Fisheries Complex's Environmental Compliance Biologist at (509) 548-2928 or malenna_cappellini@fws.gov.

Sincerely,

David B. Irving,
Leavenworth Fisheries Complex Manager

CONTINUATION SHEET from EPA FORM 3510-2B (Rev. 11-08)

A.

1. OUTFALL No. (see operational description below)	*2. FLOW (gallons per day)*		
	a. Maximum Daily	*b. Maximum 30 Day*	*c. Long Term Average*
1	32,800,000	984,000,000	26,000,000
2	8,640,000	259,200,000	288,000
3	0	0	0
4	5,760,000	172,800,000	5,040,000
5	72,000	1,008,000	72,000
6	32,800,000	984,000,000	8,100,000

Outfall #1: Base of Fish (Adult Return) Ladder
The majority of river and well water used for hatchery operations returns to Icicle Creek from Outfall #1 near the base of the adult return ladder (~ rm 2.8) except during rearing unit cleaning and maintenance activities when all water is routed through the pollution abatement ponds. All river water and groundwater used at the hatchery, minus any leakage and evaporation, is returned to Icicle Creek (non-consumptive use).

Outfall #2: Pollution Abatement Ponds
As of 2011, Leavenworth NFH has a second functional pollution abatement pond. When online, both pollution abatement ponds discharge into Icicle Creek at Outfall #2 (~rm 2.7). Outfall #2 is used during rearing unit cleaning and maintenance activities.

Outfall #3: Overflow Canal from the Screen Chambers
Currently, Outfall #3 (~rm 3.8) is not used as a discharge point by the hatchery. However, the hatchery wishes to retain this discharge point for potential future use. In the past, Outfall #3 was operated intermittently as a fish return bypass for the hatchery's water delivery system.

Outfall #4: Top of Fish (Adult Return) Ladder
In the past, Outfall #4 was used for 1 to 2 weeks a year in late April to release hatchery pre-smolts into Icicle Creek (~ rm 2.8). Currently, pre-smolts are pumped from rearing units through an above ground pipeline into Icicle Creek at approximately rm 2.75 (Outfall #5). However, the hatchery wishes to retain Outfall #4 for emergency releases and potential future use. When in operation, discharge from Outfall #1 is reduced by the amount released at Outfall #4.

Outfall #5: Pumped/Piped Fish Release
Outfall #5 is currently used for 1 to 2 weeks a year in late April to release hatchery pre-smolts which are pumped from rearing units through an above ground pipeline into Icicle Creek (~ rm 2.75). When in operation, discharge from Outfall #1 is reduced by the amount released at Outfall #5.

Outfall #6: Pump Discharge to Hatchery Channel
Outfall #6 (~rm 3.3) in the Hatchery Channel section (rm 2.8 to 3.8) of Icicle Creek will be used, as necessary, to recharge LNFH's wells. When in operation, discharge from Outfall #1 is reduced by the amount released at Outfall #6. (The long term average of 8,100,000 gallons per day was estimated from the calculation of pumping 53 cfs continuous for 3 months, or 26 cfs for 6 months).

B. Rearing and holding units currently in operation at Leavenworth NFH include:
- 2, 15' x 150' adult holding raceways
- 45, 8' x 80' raceways
- 14, 10' x 100' covered raceways
- 122 fiberglass tanks
- 16 of 40 small Foster-Lucas rearing units
- 2 of 22 large Foster-Lucas rearing units

C.1. Icicle Creek is the receiving water body.

C.2. Leavenworth NFH's water sources include Icicle Creek, Snow/Nada Lake Basin, and 7 wells. The hatchery's water rights include:

CERTIFICATE #	PRIORITY DATE	SOURCE	AMOUNT
1824	03/26/1942	Icicle Creek	42 cfs (18,851 gpm)
1825	03/26/1942	Snow & Nada Lakes	16,000 acre feet
016378	08/01/1939	Groundwater (1 Wells)	1.56 cfs (700 gpm)
016379	06/01/1940	Groundwater (1 Wells)	2.01 cfs (900 gpm)
3103-A	10/16/1957	Groundwater (1 Wells)	2.67 cfs (1200 gpm)
G4-27115C	10/20/1980	Groundwater (4 Wells)	8.69 cfs (3900 gpm)